



PATENT
TH-2545 (US)
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| APPLICANT(S): | BERT POTS, KOLA FAGBAYI, P. KEVIN SCOTT AND MARK MATEER | § | ATTORNEY | |
| | | § | DOCKET | TH-2545 |
| | | § | NUMBER: | |
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| SERIAL NUMBER: | 10/768,618 | § | | |
| | | § | | |
| FILING DATE: | JANUARY 30, 2004 | § | ART UNIT: | 2856 |
| | | § | | |
| FOR: | SYSTEM AND METHOD FOR MEASURING ELECTRIC CURRENT IN A PIPELINE | § | | |
| | | § | EXAMINER: | CHARLES D. GARBER |

Commissioner of Patents
P. O. Box 1450
Alexandria, VA 22313-1450

DECLARATION UNDER 37 CFR 1.132

I, MARK WILSON MATEER, declare that:

I am a co-inventor of the product disclosed and claimed in the above-referenced patent application;

I received a Masters degree from the University of Missouri at Rolla in Metallurgical Engineering in 1981;

I have been employed by Shell as a Materials and Corrosion engineer since 2000;

I am an inventor in one U.S. patent in the area of cathodic protection monitoring systems;

I am presently employed by Shell Global Solutions as a Materials and Corrosion Engineer;

I have read the Office Action issued in this case on December 14, 2005;

I have read U.S. Patent No. 6,031,381 (Vail et al.)(Vail);

I have read U.S. Patent No. 3,539,915 (Walters et al.)(Walters);

I believe that the claimed invention is a novel and unobvious advance in the area of pigging devices.

Claim Rejections – 35 USC 112

In the Office Action, the Examiner rejected Claims 1-42 as being indefinite. The Examiner was unable to determine the meaning of “microvolt range.”

I respectfully submit that “microvolt range” has a meaning to those skilled in the art to mean from 1 to 1000 microvolts. Above 1000 microvolts would be expressed as the “millivolt range,” and below 1 microvolt would be expressed as the “nanovolt range.”

“Microvolt range” does not mean 0-1 microvolt, 0-1000 microvolts, or 900-1000 microvolts as suggested by the Examiner.

Claim Rejections – 35 USC 103

In the Office Action, the Examiner rejected Claims 1-4, 6-8, 10, 12, 22, 28-30, 33-34, and 42 as being un-patentable over Vail in view of Walters.

Our invention is directed to reducing voltage error to a microvolt range as a voltage measuring system is moved through a pipe. Our claim 1 recites, “a first contact for maintaining electrical contact with the pipe as the vehicle moves through the pipe, and a second contact ...for maintaining electrical contact with the pipe as the vehicle moves through the pipe.”

In contrast, Vail teaches a stationary device, which will not encounter the voltage error problems that our invention is directed to. In fact, Vail's stationary apparatus would not benefit from our invention, as our invention is directed to reducing voltage measurement error as a system is moving. As the Examiner noted, Vail does not teach how the circuitry travels through the borehole casing, nor does Vail suggest moving the circuitry through the borehole casing. I respectfully submit that Vail also does not teach how Vail's electrical contacts would be able to maintain electrical contact as the circuitry was traveling through the borehole casing. It is known to those knowledgeable in the art that a moving tool capable of accurately measuring voltages

in the microvolt range between two separated moving contacts has been attempted several times prior to our claim without success. If Vail's teaching included such a claim, it would have been specifically mentioned, as that would have been a major advance.

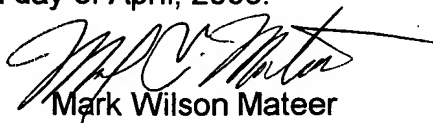
The Examiner suggested modifying Vail's teaching with Walters' to come up with our invention. Walters teaches brushes 24 and 25, which are used to create a magnetic field in a pipe with a current pulse. Walters does not teach or suggest using the brushes 24 and 25 to measure a voltage difference between them.

It is unclear to me why the Examiner would combine Vail's stationary voltage reading device with Walters' moving magnetic field creating pig.

I respectfully submit that neither Vail nor Walters, alone or in combination, teach or suggest the desirability of a first contact for maintaining electrical contact and a second contact for maintaining electrical contact with a pipe as the vehicle moves through the pipe.

I DECLARE FURTHER that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Executed this thirteenth day of April, 2006.


Mark Wilson Mateer